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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,578	05/31/2001	Jason Wang	06975-138001 / AOLT V-13	6557
26171 7590 01/25/2008 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022				
EXAMINER HOSSAIN, FARZANA E				
ART UNIT 2623		PAPER NUMBER		
MAIL DATE 01/25/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/867,578	Applicant(s) WANG ET AL.	
	Examiner Farzana E. Hossain	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 20-22 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30 is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-15 and 20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to communications filed 10/29/2007. Claims 1, 5, 8-15 and 20-22 are amended. Claims 2-4, 6 and 7 are original. Claims 16-19, 23-25 are cancelled. Claims 26-27 have been previously presented. Claims 28-30 are new.

Response to Arguments

2. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 8-15, 20-22 are objected to because of the following informalities: The claims recite "at least one computer readable storage medium storing one or more computer programs, the one or more computer programs comprising executable instructions..." The applicant's specification discloses a computer program or software application comprising executable instructions for the claim limitations disclosed in claims 8-15 and 20-22 and the software application is also stored on one medium (Figure 3, Page 3, lines 7-29).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-7, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lett et al (US 5,592,551 and hereafter referred to as "Lett") in view of Ellis et al (US 2005/0193413 and hereafter referred to as "Ellis") and Takahashi et al (US 2002/0056106 and hereafter referred to as "Takahashi"). Note: Lett incorporates by reference Banker et al (application 08/229,805; US 5,485,221 and hereafter referred to as "Banker").

Regarding Claim 1, Lett discloses a method for making data derived from a video signal accessible (Column 5, lines 22-33), comprising: receiving data derived from a vertical blanking interval of a video signal (Column 5, lines 22-33, 66-67, Column 6, lines 1-4); storing the data received on a storage medium for retrieval based on a subsequently received request as the user requests to view the electronic programming guide (EPG) and the EPG is generated from data (Column 8, lines 45-50, Figure 4a, Figure 4B); and indexing the stored data (Column 8, lines 45-50) and an application retrieving a portion of the stored data based on a request for the EPG to render the EPG from the retrieved stored data based on a request or query such as favorite

channels or information (Column 9, lines 16-26, Column 11, lines 8-19, Column 12, lines 3-5, Column 15, lines 13-40, Figure 4A, Figure 4B). Lett discloses generating display data corresponding to a listing of shows for presentation as part of the EPG (Column 8, lines 55-65, Figures 4a, 4b, 5, Column 11, lines 8-19) by: determining search criteria associated with the listing of shows including channel listings and favorite channels (Column 11, lines 20-40, Column 14, lines 24-38, Column 15, lines 13-40), searching the EPG data stored in the storage area based on the search criteria associated with the listing of shows (Column 11, lines 20-40, Column 14, lines 24-38, Column 15, lines 13-40, Column 8, lines 45-50), identifying one or more shows to include in the listing of shows based on searching the index data of the EPG data stored in the storage area (Column 11, lines 20-40, Column 14, lines 24-38, Column 15, lines 13-40, Column 8, lines 45-50), accessing, from the index data stored in the storage area, show information for the identified one or more shows (Column 11, lines 20-40, Column 14, lines 24-38, Column 15, lines 13-40, Column 8, lines 45-50) and generating the display data corresponding to the listing of shows based on the show information accessed from the index data stored in the storage area (Column 11, lines 20-40, Column 14, lines 24-38, Column 15, lines 13-40, Column 8, lines 45-50); and generating display data corresponding to a show description for presentation as part of the EPG (Column 12, lines 2-8). Banker discloses stored data stored in the EPG database (Column 17, lines 18-20). Banker discloses extracting and filtering the data (Column 13, lines 21-67, Column 14, lines 1-30). Lett is silent on remaining limitations of the claim.

In analogous art, Ellis discloses a method of receiving data and storing the data received on a storage medium for retrieval (Figure 7); indexing the stored data such that an application may retrieve a portion of the stored data with a database query and render an EPG based on the retrieved stored data (Page 4, paragraph 0046), indexing the stored data (Figure 7) including preparing data tables having an index data area and a detail data area (Figure 7, 62, 64, 66), separating the stored data into index data and detail data (Figure 7, 62, 64, 66), and loading data to the data tables as the user receives program listings information and stores data in two separate tables in the database (Figure 7, 62, 64, 66). Takahashi discloses a detail data area (Figure 9, 65) and generating display data corresponding to a listing of shows for presentation as part of the EPG (Figures 1, 2, 6, Page 5, paragraph 0069) by: generating display data corresponding to a show description for presentation a part of the EPG (Figure 15) by: determining search criteria associated with a particular show (Page 7, paragraphs 0095-0098), searching the detail data stored in the detail data area based on the search criteria associated with the particular show (Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095), identifying show description information for the particular show based on searching the detail data stored in the detail area (Figures 11, 12, 13A, Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095), accessing from the detail data stored in the detail data area, the show description information for the particular show (Figures 11, 12, 13A, 14, 15, Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095), and generating the display data corresponding to the show description based on the

description information accessed from the detail data stored in the detail data area (Figures 11, 12, 13A, 14, 15, Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lett to include indexing the stored data such that an application may retrieve a portion of the stored data with a database query and render an EPG based on the retrieved stored data (Page 4, paragraph 0046), indexing the stored data (Figure 7) including preparing data tables having an index data area and a detail data area (Figure 7, 62, 64, 66), separating the stored data into index data and detail data (Figure 7, 62, 64, 66), and loading data to the data tables as the user receives program listings information and stores data in two separate tables in the database (Figure 7, 62, 64, 66) as taught by Ellis in order to provide a system with memory requirements that can be adjusted (Page 1, paragraph 0007) as disclosed by Ellis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination to include determining search criteria associated with a particular show (Page 7, paragraphs 0095-0098), searching the detail data stored in the detail data area based on the search criteria associated with the particular show (Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095), identifying show description information for the particular show based on searching the detail data stored in the detail area (Figures 11, 12, 13A, Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095), accessing from the detail data stored in the detail data area, the show description

information for the particular show (Figures 11, 12, 13A, 14, 15, Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095), and generating the display data corresponding to the show description based on the description information accessed from the detail data stored in the detail data area (Figures 11, 12, 13A, 14, 15, Page 5, paragraphs 0076-0078, Page 8, paragraph 0089, Page 7, paragraphs 0095) as taught by Takahashi in order to improve EPG searching methods for a user to search for information in a program (Page 1, paragraphs 0008-0012) as disclosed by Takahashi.

Regarding Claim 4, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Lett discloses the video signal is a cable broadcasted video signal such that the receiving code segment or control program receiving the data includes receiving data derived from the vertical blanking interval of the cable broadcasted video signal (Figure 1, 12, Column 4, lines 22-2).

Regarding Claim 5, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Lett discloses the video signal is a terrestrial broadcasted video signal such that receiving the data includes receiving data derived from the vertical blanking interval of the terrestrial broadcasted video signal (Column 1, lines 33-35, Column 5, lines 4-26, Column 5, lines 66-67, Column 6, lines 1-3).

Regarding Claim 6, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Lett discloses wherein the video signal is a satellite broadcasted video signal such that the receiving the data includes control program receiving data derived from the

vertical blanking interval of the satellite broadcasted video signal (Figure 1, Column 4, lines 22-26).

Regarding Claim 7, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Banker discloses that deriving the data by parsing data receiving from the VBI of the video signal (Figure 3, Column 13, lines 21-30).

Regarding Claim 26, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Lett discloses updating EPG data (Column 5, line 5-65, Column 6, lines 1-6, Column 13, lines 4-30). Ellis discloses indexing the stored data further includes updating all indexes associated with the data tables (Pages 3-4, paragraphs 0038, 0045).

Regarding Claim 27, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Banker discloses comprising storing the data received in temporary memory prior to storing the data received on a storage medium (Column 14, lines 21-26).

Regarding Claim 28, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Lett discloses determining search criteria associated with the listing of shows determining search criteria that includes a time range and a channel range or based on the current time and channel (Figures 4a, 4b, Column 11, lines 20-65, Column 13, lines 61-67, Column 14, lines 1-2, 24-38, Column 15, lines 13-40); searching the index data stored in the storage area based on the search criteria associated with the listing of shows including searching the index data stored in the storage area based on the time range and channel range (4a, 4b, Column 11, lines 20-65, Column 13, lines 61-67, Column 14, lines 1-2); identifying one or more shows to include in the listing of shows based on searching the index data stored in the storage area includes identifying one or

more shows included within the time range and the channel range (4a, 4b, Column 11, lines 20-65, Column 13, lines 61-67, Column 14, lines 1-2); accessing from the index data stored in the storage area, show information for the identified one or more shows includes forming an array including brief show information for each of the identifies one or more shows included within the time range and the channel range (Figure 4a, Figure 4b) and determining search criteria associated with the particular show includes determining a time attribute and a show reference as the currently tuned program references a time and reference to the show on the EPG (Figures 4a and 4b). Ellis discloses an index data area and a detail data area (Figure 7). See claim 1. Takahashi discloses determining search criteria associated with the particular show includes determining a time attribute and a show reference (Page 7, paragraphs 0095-0098, Pages 3-4, paragraph 0053), searching the detail area stored in the detail area based on the search criteria associated with the particular show includes searching the detail data stored in the data area based on the time attribute and show reference (Page 7, paragraphs 0095-0098, Pages 3-4, paragraph 0053); identifying show description information for the particular show based on searching the detail data stored in the detail data area includes identifying show description information for the particular show corresponding to the time attribute and the show reference (Page 7, paragraphs 0095-0098, Pages 3-4, paragraph 0053) and accessing from the detail data stored in the detail data area, the show description for the particular show includes accessing from the detail data stored in the detail data area, extended information for the particular show (Page 7, paragraphs 0095-0098, Pages 3-4, paragraph 0053).

Regarding Claim 29, Lett, Ellis and Takahashi disclose all the limitations of Claim

1. Lett discloses generating display data corresponding to a category filtered listing of shows for presentation as a part of the EPG (Column 14, lines 15-31) by: determining search criteria including a time attribute and category attribute or based on broadcasting time of a given day and category (Column 14, lines 15-31), searching the index data stored in the storage area based on the time attribute and the category attribute (Column 14, lines 15-31), based on searching the storage area, identify one or more shows corresponding to the time attribute and the category attribute (Column 14, lines 15-31), accessing from the index data stored in the storage area, show information for the identified one or more shows corresponding to the time attribute and the category attribute (Column 14, lines 15-31) and generating the display data corresponding to the category filtered listing of shows based on the show information, accessed from the index data stored in the storage area for the identified one or more shows corresponding to the time attribute and the category attribute (Column 14, lines 15-31). Ellis discloses an index data area and a detail data area (Figure 7). See claim 1.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lett in view of Ellis and Takahashi as applied to claim 1 above, and further in view of Ellis et al (US 6,665,869 and hereafter referred to as "Ellis2").

Regarding Claim 2, Lett, Ellis and Takahashi disclose all the limitations of Claim

1. Lett discloses that storing the data is accessible via television interface (Figure 2, 20). Lett, Ellis and Takahashi do not explicitly disclose the storing of the data makes the

data accessible to an application program interface. In analogous art, Ellis2 discloses the storing of the data makes the data accessible to an application program interface (Column 6, lines 13-19). Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination to include storing of the data makes the data accessible to an application program interface (Column 6, lines 13-19) as taught by Ellis2 in order to allow multiple applications to utilize interactive program guide as well as the program guide application (Column 1, lines 38-58) as disclosed by Ellis2.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lett in view of Ellis and Takahashi as applied to claim 1 above, and further in view of Stautner et al (US 6,172,677 and hereafter referred to as "Stautner").

Regarding Claim 3, Lett, Ellis and Takahashi disclose all the limitations of Claim 1. Lett, Ellis and Takahashi are silent on the storage medium is a disk drive. In analogous art, Stautner discloses that the storage medium is a disk drive (Column 4, lines 9-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination to include storage medium is a disk drive (Column 4, lines 9-11) as taught by Stautner in order to improve EPG searching methods for a user to search for information in a program (Page 1, paragraphs 0008-0012) as disclosed by Takahashi.

Allowable Subject Matter

8. Claim 30 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: Lett discloses a method (Column 9, lines 43-56, Column 5, lines 22-33, 66-67, Column 6, lines 1-4, Column 8, lines 35-54, Column 9, lines 16-26, Column 11, lines 8-19, Column 12, lines 3-5, Column 15, lines 13-40), comprising: receiving data representing information communicated in a vertical blanking interval (VBI) of a video signal (Column 9, lines 1-25). Banker discloses receiving data representing information in the VBI (Figure 3); generating digital data based on the data using a predetermined algorithm or program functions (Column 13, lines 21-67, Column 10, lines 52-67, Column 11, lines 1-2, Column 53-67, Column 12, lines 1-3); and storing the generated data on a storage medium wherein the receiving code segment includes (Column 13, line 67, Column 14, lines 1-30, Column 11, lines 1-2, Column 53-67, Column 12, lines 1-3); periodically sampling at least a portion of the video signal containing the information (Column 14, lines 13-20), the code segment or control program generates a bitstream from the sample (Column 14, lines 13-30) and the control program receives a portion of the data (Column 14, lines 13-52). Jones et al (5,978,013) discloses generating a numeric representation of the information including an array of values (Figure 8, Figure 7, Column 14, lines 17-67, Column 15, lines 1-45), and a code segment that receives the array as at least a portion of the data (Column 15, lines 22-45). The Microsoft Press 3rd edition Computer Dictionary defines array as a list of data values, all of the same type, any element which can be referenced by an expression consisting of the array name followed by an indexing expression. Landis (US 5,659,368) discloses comparing

the slicing level to distinguishes run in clock signal and distinguishes closed captioning data and extended data services data about a program (Column 3, lines 1-5, 45-56)

The prior art of record does not suggest nor teach the following limitations (or similar limitations) in conjunction with other elements in the claim: computing an average of several of the array values; biasing the average to establish a cutoff value and classifying the information as a EPG data based on whether the received data exceeds the cutoff value.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farzana E. Hossain whose telephone number is 571-272-5943. The examiner can normally be reached on Monday to Friday 7:00 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FEH
January 15, 2008


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